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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,198	11/03/2003	Shunpei Yamazaki	0553-0109.04	3962
7590	08/18/2005		EXAMINER	
Edward D. Manzo Cook, Alex, McFarron, Manzo, Cummings & Mehler, Ltd. 200 West Adams St., Ste. 2850 Chicago, IL 60606			INGHAM, JOHN C	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/700,198	YAMAZAKI ET AL.	
	Examiner	Art Unit	
	John C. Ingham	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09132633.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11 03 2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because of numbering errors. In figure 6B, item 1236 is referred to in the specification as item 436 (pg. 26, ln. 25). In figure 10, item 1005 (*Gamma Correction Control Circuit*) is referred to in the specification as item 1002 (pg. 49, ln. 3). In figure 11 there are two items labeled 1108, *Gate Side Shift Register* and *Gamma Control Circuit*. The specification refers to the *Gate Side Shift Register* as item 1108 (pg. 52, ln. 19), while *Gamma Control Circuit* is referred to as item 1106 (pg. 53, ln. 4). In figure 18E, the *Audio Input Portion* is missing the reference number given in the specification (2203 on pg. 57, ln. 3).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 23-30 and 32-39 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 and claims 13-19 of U.S. Patent No. 6,667,494 in view of Huang, H.C. et al., hereinafter "Huang".

While it is noted that the instant application is a continuation of a divisional (US 6,670,635) of patent '494, the basis for this double patenting rejection is due to the fact that the claims in the instant application are drawn to the same invention as those of patent '494 and are not patentably distinct. Paper number 6, mailed on 11 August 1998, imposed a restriction requirement on the pending application (09/132,633) at that time. The application claims were divided between a semiconductor display device and

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a semiconductor memory device. The elected claims of application 09/132,633, now patent 6,667,494, were drawn to the semiconductor display device. The divisional claims of application 09/539,828, now patent 6,670,635, were drawn to the semiconductor memory device. Claims in the instant application are drawn to the semiconductor display device, and thus the double patenting rejection is not at odds with 35 U.S.C. 121.

Regarding claim 23 and claim 29, applicant's patent '494 claims a semiconductor device comprising: a pixel region in which a plurality of thin film transistors are arranged in matrix; a picture signal supply source for supplying a picture signal; a memory for storing data used in gamma correction of a voltage applied to voltage lines; and a gamma correction control circuit for adjusting said voltage based on said data to carry out said gamma correction of said voltage, wherein said plurality of thin film transistors and said memory and said gamma correction control circuit are provided over a same insulating surface.

Patent '494 does not specifically claim a switching circuit connected to a source signal line and a plurality of voltage lines for selecting at least one of said voltage lines, nor a latch circuit for supplying said picture signal from said picture signal supply source to said switching circuit. It also does not claim a shift register. However, it does specifically claim a driver for switching the plurality of TFTs. Column 5, lines 65-67 discloses that the "driver 106 is constituted by a shift register, a buffer, a digital decoder, a D/A converter, and the like".

Huang describes a digital data driver, which contains the same driver elements as disclosed by patent '494 and the instant application. Figure 1 shows a shift register, a latch circuit for supplying a picture signal (digital input data) and a switching circuit (8:1 multiplexer) connected to a source signal line (digital data in latches) and a plurality of voltage lines (8 reference voltages). It would have been obvious to one of ordinary skill in the art at the time of the invention to specify the basic elements of the digital driver and integrate those elements into the invention. A driver consisting of these specific elements allows each reference voltage line to be tailored to yield an equalized grey scale, and also allows the display to interface with different image sources (Huang pg. 4 ln. 8-13).

Regarding claim 24, applicant's patent '494 claims a device according to claim 23 wherein said memory comprises a nonvolatile memory.

Regarding claim 25, applicant's patent '494 claims a device according to claim 23 wherein said picture signal is a digital signal.

Regarding claim 26, applicant's patent '494 claims a device according to claim 23 wherein the picture signal is an analog signal, and the semiconductor device further comprises a conversion circuit for converting said analog signal to a digital signal.

Regarding claim 27, applicant's patent '494 claims a device according to claim 23 wherein an active layer of each said thin film transistors has a thickness of 10 to 100nm.

Regarding claim 28, applicant's patent '494 claims a device according to claim 23 wherein said semiconductor device is incorporated into one selected from a group consisting of a video camera, a still camera, a projector, a head mount display, a car

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navigation system, a personal computer, a portable information terminal, a mobile computer and a portable telephone.

Regarding claim 30, applicant's patent '494 claims a device according to claim 23 wherein said memory comprises a thin film transistor. The specific claim language describes the memory as including FAMOS type TFTs.

Regarding claims 32 and 38, applicant's patent '494 claims a semiconductor device comprising an electroluminescence element; a pixel region in which a plurality of thin film transistors are arranged in matrix; a picture signal supply source for supplying a picture signal; a memory for storing data used in gamma correction of a voltage applied to voltage lines; and a gamma correction control circuit for adjusting said voltage based on said data to carry out said gamma correction of said voltage, wherein said plurality of thin film transistors and said memory and said gamma correction control circuit are provided over a same insulating surface. Missing claim language in patent '494 (switching circuit and latch circuit language) is taught by Huang as discussed above.

Regarding claim 33, applicant's patent '494 claims a device according to claim 32 wherein said memory comprises a nonvolatile memory.

Regarding claim 34, applicant's patent '494 claims a device according to claim 32 wherein said picture signal is a digital signal.

Regarding claim 35, applicant's patent '494 claims a device according to claim 32 wherein the picture signal is an analog signal, and the semiconductor device further comprises a conversion circuit for converting said analog signal to a digital signal.

Regarding claim 36, applicant's patent '494 claims a device according to claim 32 wherein an active layer of each said thin film transistors has a thickness of 10 to 100nm.

Regarding claim 37, applicant's patent '494 claims a device according to claim 32 wherein said semiconductor device is incorporated into one selected from a group consisting of a video camera, a still camera, a projector, a head mount display, a car navigation system, a personal computer, a portable information terminal, a mobile computer and a portable telephone.

Regarding claim 38, applicant's patent '494 claims a device according to claim 32 wherein said memory comprises a thin film transistor. The specific claim language describes the memory as including FAMOS type TFTs.

3. Claims 31 and 40 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12 and 15 of U.S. Patent No. 6,597,014 in view of U.S. Patent No. 6,667,494 and further in view of Huang. Patent '014 includes claim language that describes the gamma correction circuit as comprising at least one thin film transistor. Patent '494 includes claim language describing the semiconductor device as discussed above and Huang provides the teaching for missing claim language regarding the switching circuit and latch circuit, also discussed above.

Regarding claim 31, applicant's patent '014 claims a device according to claim 23 wherein said gamma correction control circuit comprises a thin film transistor.

Regarding claim 40, applicant's patent '014 claims a device according to claim 32 wherein said gamma control circuit comprises a thin film transistor.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John C. Ingham whose telephone number is (571) 272-1705. The examiner can normally be reached on M-F, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jci


GEORGE ECKERT
PRIMARY EXAMINER